

REMARKS/ARGUMENTS

Claims 1-20 are pending, and claims 3 and 5 are allowed. The Applicants' Attorney has amended claims 2, 4, and 6-20. In light of the following, all of the claims are in condition for allowance. But if, after considering this response, the Examiner does not agree that all of the claims are allowable, then the Examiner is requested to schedule a teleconference with the Applicants' attorney to further the prosecution of the application.

Rejection of claims 1-2, 4, 6-20 under §103(a) as being unpatentable over Lee et al. (US 5,930,826) in view of Applicant's Admitted Prior Art (AAPA)

Claim 1

Claim 1 recites a first user-configurable flag element and a second user-configurable flag element associated with a data storage area, the first and second flag elements being used to define a protected state of the data storage area against alteration of the content of the data storage locations thereof, the protected state defined by the first flag element being user-removable, the protected state defined by the second flag element being permanent and non-removable.

For example, referring to FIG. 5 of the patent application, in one embodiment first and second user-configurable flag elements K1 and P1 are associated with a data storage area SEC1, and define a protected state of SEC1 against alteration of the contents of SEC1. The protected state (logic 0) defined by P1 is user removable, but the protected state (also logic 0) defined by K1 is permanent and unremovable. That is, as long as K1 = 1, one can set P1 = 0 (SEC1 protected) and thereafter reset P1 = 1 (SEC1 unprotected). But if one sets K1 = 0, then one cannot thereafter reset P1 = 1; the ability to alter the contents of SEC1 is permanently disabled.

In contrast, although Lee discloses an equivalent of the first flag element that defines a removable protection state, he does not disclose an equivalent of the second flag element that defines a permanent protected state. Referring, e.g., to FIG. 3, Lee's ERS-bit, PGM-bit, and RD-bit respectively protect a corresponding portion of memory

from being erased, programmed, and read. But as best understood by the Applicants' attorney, these protections are user-removable by resetting these bits.

Furthermore, the AAPA does not disclose or suggest the limitation missing from Lee, namely the second flag element that defines a permanent protected state. The AAPA merely discloses a one-time-programmable (OTP) register that once loaded with a value, cannot be reloaded with another value. The Examiner seems to be equivocating this OTP with the K register in FIG. 5 of the patent application, and thus with the second flag element recited in claim 1. But neither Lee nor the AAPA provides motivation for one of skill in the art to combine Lee's protection bits (ESR-bit, PGM-bit, RD-bit) with the AAPA OTP bits to provide two levels of protection (alterable and permanent) to the contents of a memory. Merely adding the AAPA OTP bits to Lee's memory does not result in the memory recited in claim 1. To arrive at the memory recited in claim 1, one would need to couple the AAPA OTP bits to Lee's protection bits such that not only are the OTP bits themselves unalterable after programming, but such that the OTP bits can also render Lee's protection bits unalterable after the OTP bits are programmed. But there is absolutely no motivation for such coupling in either Lee or the AAPA, and the Examiner's finding of such motivation amounts to the impermissible use of hindsight. At most, the AAPA would motivate one to replace Lee's protection bits with the AAPA OTP bits so as to provide permanent protection to the contents of Lee's memory instead of non-permanent protection. And this is a "generous" interpretation given that the AAPA does not concern protection of memory contents that are separate from the contents of the OTP register.

Consequently, the combination of Lee and the AAPA do not render claim 1 obvious.

Claims 2, 4 and 6-8

Claims 2, 4 and 6-8 are patentable by virtue of their dependency from independent claim 3.

Claim 9

Claim 9 as amended recites a first data-storage portion operable to store data, a first status portion operable to allow alteration of the data while in a first state and to prohibit alteration of the data while in a second state, and a second status portion operable to allow the state of the first status portion to be altered while in a third state and to prohibit the states of the first and second status portions from being altered while in a fourth state.

For example, referring to FIG. 5 of the patent application, a first data-storage portion SEC 1 is operable to store data. A first status portion P1 is operable to allow alteration of the SEC 1 data while in a logic 1 (first) state and to prohibit alteration of the data while in a logic 0 (second) state. A second status portion K1 is operable to allow the state of the P1 to be altered while K1 is in a logic 1 (third) state and to prohibit the states of P1 and K1 to be altered while K1 is in a logic 0 (fourth) state.

In contrast, the above analysis of Lee and the AAPA indicates that neither Lee nor the AAPA discloses or suggests a second status portion that is operable to prohibit the states of the first and second status portions from being altered.

Claims 10-16

Claims 10-16 are patentable by virtue of their dependency from independent claim 9.

Claim 17

Claim 17 as amended recites receiving a request to modify a protection state of a memory sector, granting the request if a status memory associated with the memory sector has an unlocked state, and denying the request if the status memory has a locked state.

In contrast, the combination of Lee and the AAPA does not suggest a status memory having a locked (permanent) state.

Claim 18

Claim 18 as amended is patentable for reasons similar to those recited above in support of claim 17.

Claim 19

The combination of Lee and the AAPA does not disclose irrevocably configuring a memory sector to prohibit alteration of data stored in the memory sector only after revocably configuring the memory sector to prohibit alteration of the data.

Claim 20

Claim 20 is patentable for reasons similar to those recited above in support of the patentability of claim 9.

CONCLUSION

In light of the foregoing, claims 1-20 are in condition for allowance, which is respectfully requested.

In the event any fees are due as a result of this amendment, payment has been enclosed in the form of a check. However, you are hereby authorized to charge overpayment or deficiencies in payment to Deposit Account No. 07-1897.

If, after considering this response, the Examiner does not agree that all of the claims are allowable, then it is respectfully requested that the Examiner schedule a phone interview with the Applicants' attorney at (425) 455-5575.

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Respectfully submitted,

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